Project Note

Date: October 22, 2007	Project Number: TTEMI-05-003-0019

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Firm: Tetra Tech EM Inc.
Title: Environmental Scientist
Time: 1335

Signature: Shanna Davis

Subject: Volume of ponds at the Barite Hill property

PROJECT NOTE SUMMARY

To determine the volume of liquid contained in the ponds, Tetra Tech used the information gathered during the 2007 Response Engineering and Analytical Contract (REAC) removal site evaluation (RSE) (Ref. 34).

In February 2007, the U.S. Environmental Protection Agency (EPA) directed REAC to conduct a RSE at the Barite Hill property and field activities were conducted in March 2007 (Ref. 34, p. 1). RSE activities included determining the sediment depths and volumes located in the ponds. REAC determined the depth to sediment as well as the depth to the bottom of each pond. Measurements were collected at several locations in each pond to determine the average depth to sediment (Ref. 34, pp. 17, 244, 237 through 243). Also, the surface area of each pond was determined from aerial photographs; however, the aerial photograph date used to calculate the surface area of the ponds is not known (Ref. 34, p. 7).

To determine the volume of liquids contained in the ponds, Tetra Tech calculated the average depth to sediment for each pond in feet (average depth to sediment minus feet above waterline) and then multiplied this number by the surface area of each pond. Below is a list containing each pond's average depth to sediment, surface area, and the corresponding volume.

Two figures are attached. The first figure shows the layout of the ponds and is contained in Reference 6, Figure 2. The second figure shows how the ponds are labeled and is contained in Reference 34, p. 23.

Process Area Ponds

Pond A (Pregnant Pond)
- Surface Area - 36,700 square feet (ft^2)
- Average Depth to Sediment - 9.57 feet
- Volume of Liquid – 351,219 cubic feet (ft^3)

Pond B (Barren Pond)
- Surface Area – 18,200 ft^2
- Average Depth to Sediment – 10.76 feet
- Volume of Liquid – 195, 832 ft^3

Pond C (Rinse Pond 1)
- Surface Area – 16,600 ft^2
- Average Depth to Sediment – 8.04 feet
- Volume of Liquid – 133,464 ft^3

PROJECT NOTE SUMMARY (Continued)

Pond D (Rinse Pond 2)
- Surface Area – 8,300 ft^2
- Average Depth to Sediment – 6 feet
- Volume of Liquid – 49,800 ft^3

Total Process Area Pond Volume = 351,219 ft^3 + 195,832 ft^3 + 133,464 ft^3 + 49,800 ft^3 = 730,315 ft^3

Permanent Leach Pad Solution Ponds

Pond F (Barren Pond)
- Surface Area – 100,000 ft^2
- Average Depth to Sediment – 11.11 feet
- Volume of Liquid – 1,111,000 ft^3

Pond G (Pregnant Pond)
- Surface Area – 26,900 ft^2
- Average Depth to Sediment – 8.29 feet
- Volume of Liquid – 223,001 ft^3

Pond H (Rinse Pond)
- Surface Area – 22,200 ft^2
- Average Depth to Sediment – 10.73 feet
- Volume of Liquid – 238,206 ft^3

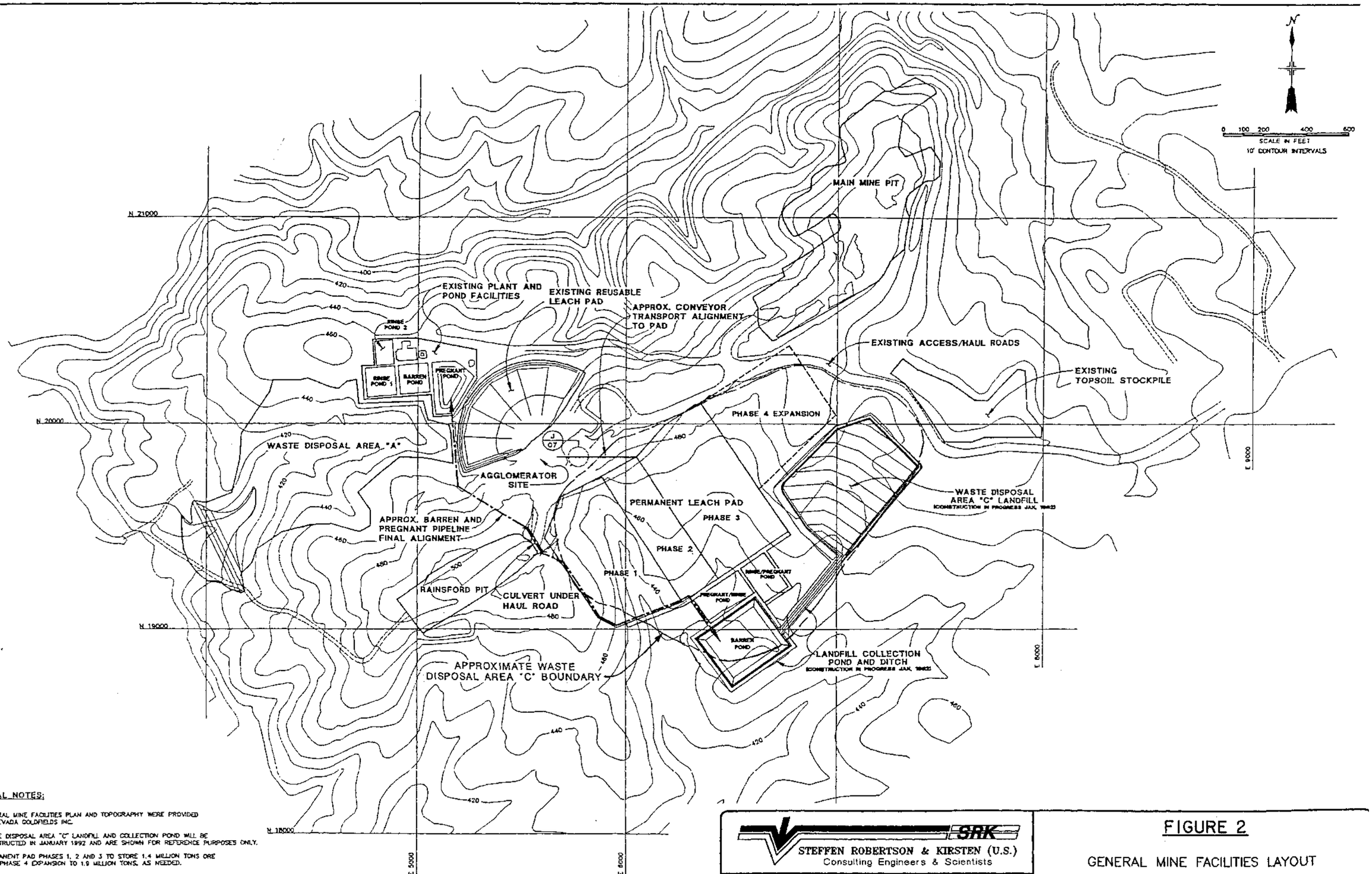
Total Permanent Leach Pad Solution Pond Volume = 223,001 ft^3 + 1,111,000 ft^3 + 238,206 ft^3 = 1,572,207 ft^3

Process Area Pond Volume + Permanent Leach Pad Solution Pond Volume = 730,315 ft^3 + 1,572,207 ft^3 = 2,302,522 ft^3

RESPONSE REQUIRED

(x) None ( ) Phone call ( ) Memo ( ) Letter ( ) Report

cc: File (x) Project Manager ( ) Principal Investigator ( ) Other (specify)



GENERAL NOTES:

1) GENERAL MINE FACILITIES PLAN AND TOPOGRAPHY WERE PROVIDED BY NEVADA GOLDFIELDS INC.
2) WASTE DISPOSAL AREA "C" LANDFILL AND COLLECTION POND WILL BE CONSTRUCTED IN JANUARY 1992 AND ARE SHOWN FOR REFERENCE PURPOSES ONLY.
3) PERMANENT PAD PHASES 1, 2 AND 3 TO STORE 1.4 MILLION TONS ORE WITH PHASE 4 EXPANSION TO 1.9 MILLION TONS, AS NEEDED.

REFERENCE:
AFTER DRAWING TITLED, "GENERAL MINE FACILITIES LAYOUT", BY WESTEC, DRAWING 03110-02, DATED: 12/91.

STEFFEN ROBERTSON & KIRSTEN (U.S.)
Consulting Engineers & Scientists

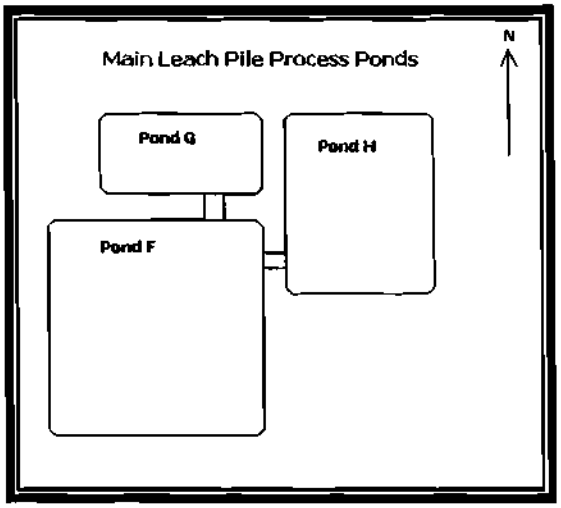
PROJECT NO.	DATE	REVISION
14115	04/95	A

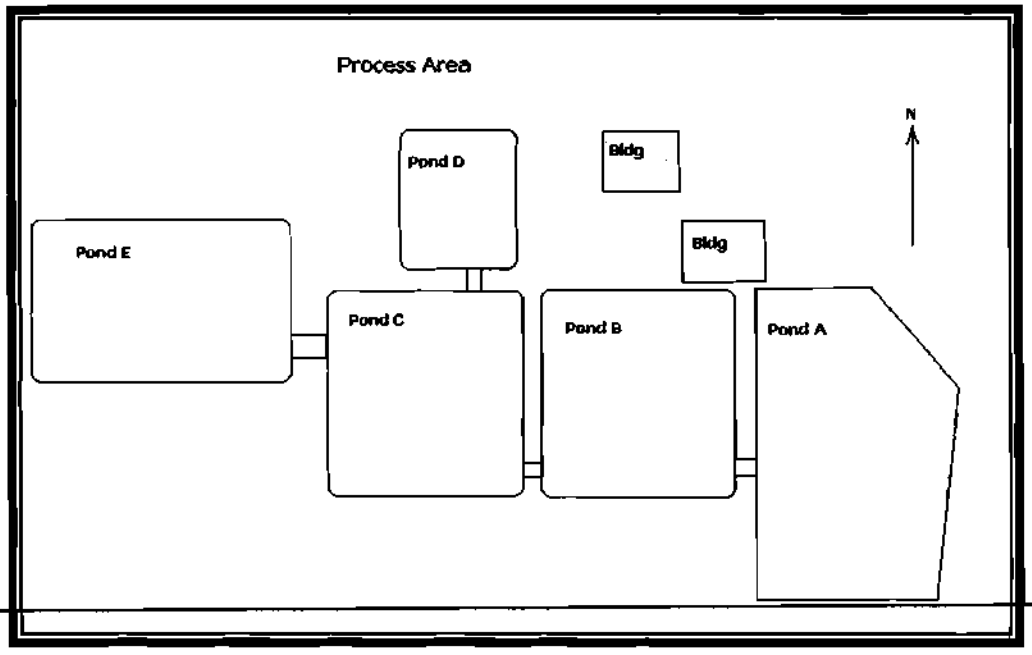
FIGURE 2

GENERAL MINE FACILITIES LAYOUT

Table 17. Process Pond Labels and pH Results
Barite Hill Gold Mine
McCormick County, SC
June 2007

Pond	pH
A	9.30
B	9.10
C	9.08
D	9.20
E	8.48
F	7.20
G	8.10
H	6.85
I	7.95





Notes: Pond I was located west of the main parking area. It can be described as a shallow depression with a large quantity of downed trees that collects pooled water.

Pond locations and sizes are given for reference only. Figures are not to scale.